

APPENDIX A

Field Data Forms

SWFL SURVEY AND DETECTION FORM

Study Area _____ Survey Site _____ Date _____

Observer(s) _____ UTM NAD and Zone _____

Start Time _____ UTM E 0 _____ N _____	Stop Time _____ UTM E 0 _____ N _____
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Intermediate Waypoints			
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____
UTM E 0 _____	N _____	UTM E 0 _____	N _____

SWFL Detections			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			
UTM E 0 _____	N _____	Banded? Y N U	Pair? Y N Nest Found? Y N
Comments _____			

Survey Summary			
Total survey hours _____	# SWFLS found _____	Est. # Pairs _____	Est. # Territories _____
Playbacks used? Y or N Cowbirds Detected? Y or N If Y, approx # _____			
Sign of Livestock? Y or N If yes, explain _____			

Additional Comments _____

Study Area _____ **Survey Site** _____ **Date** _____
Observer(s) _____ **UTM NAD and Zone** _____

[illegible][illegible]

SWFL SURVEY AND DETECTION FORM – Additional Detections

Study Area _____ Survey Site _____ Date _____

Observer(s) _____ UTM NAD and Zone _____

SWFL Detections

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

UTM E 0 _____ N _____ Banded? Y N U Pair? Y N Nest Found? Y N
Comments _____

SWFL General Site Description

(Complete at least 3 times during season: early (10–25 May), mid-season (10–25 June), and late season (10–25 July))

Study Area: _____ Survey Site: _____ Date: _____

Observer(s): _____ early _____ mid _____ late _____ other _____

Vegetation at site: >90% native 50-90% native 50-90% exotic >90% exotic

Canopy closure: <25% 25-50% 50-70% 70-90% >90%

Overstory height (m): _____ Dominant overstory species: TASP SAGO SAEX POFR Other _____

Understory height (m): _____ Dominant understory species: TASP SAGO SAEX PLSE

Other vegetation types present (e.g., cattail)? Yes No

If yes, type of vegetation: _____ percentage of site: _____
type of vegetation: _____ percentage of site: _____
type of vegetation: _____ percentage of site: _____

% of site inundated: _____

Describe type of surface water (e.g., open marsh, surface water within woody vegetation, stream, etc):

Average depth of surface water:

toes (<5cm) ankles (5-15 cm) calves (15-40 cm) knees (40-60 cm)
thighs (60-80 cm) waist (100 cm) too deep to wade (>100 cm)

% of site with saturated soils (do not include inundated areas in percentage!): _____

% of site with damp soils (do not include inundated or saturated areas): _____

If not inundated or saturated, distance (m) to standing water or saturated soil: _____

How was distance determined? Visually estimated in field Measured in field using GPS
Measured from aerial photograph Other _____

Describe type of nearest surface water: _____

Does this description cover the entire site? Y N If not, which portion is described? _____

Give a narrative description of the site, including adjacent habitats:

Additional comments: _____

STUDY AREA:
SITE:
BANDER:
DATE:
TIME:
TERR/NEST #:

UTM: NAD
Zone
E
N
NBN:
of
nestlings banded.

NOTES:

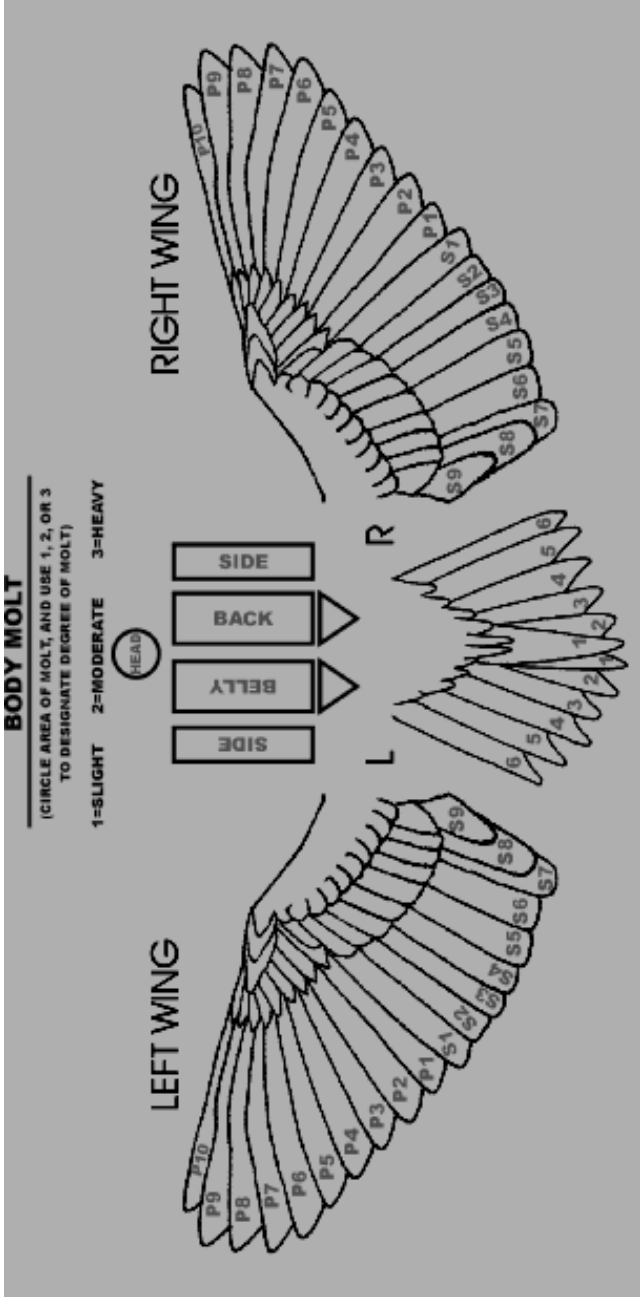
FEDERAL BAND #	COLOR COMBO		STATUS	SEX	CP	BP	AGE	FECAL SAMPLE? (Y or N)	GENETIC SAMPLE? (Y or N)	WING CHORD (mm)	TAIL (mm)	CULMEN LENGTH (mm)	CULMEN WIDTH (mm)	FAT
	L	R												

Retained Feathers Present: Yes or No (circle) – if Yes use diagram below
Colorimeter sample: Yes or No (circle)

Active Molt: Yes or No (circle) – if Yes use diagram below

*** If a genetic sample or metric was not taken, explain why in notes ***

STATUS: NCP = new cap passive, NCT = new cap target, RCP = recap passive, RCT = recap target, NBN = nestling banded
SEX: U = unknown, F = female, M = male
CP: 0 = non-breeding, S = partial breeding, M = full breeding
BP: 0 = none, 1 = smooth, 2 = vascularized and filled with fluid, 3 = wrinkled, 4 = molting
AGE: AHY = after hatch year; SY = second year; L = nestling banded in nest; HY = hatch year/young of the year
FAT: 0 = no fat; 1 = trace of fat in furculum, deeply concave, scattered patches, less than 5 percent filled; 2 = thin layer of fat in furculum, less than a third filled, trace of thin layer of fat in abdomen; 3 = furculum is ½ filled or more; small patches, not covering some areas, on abdomen; 4 = furculum more than 2/3 filled, level with clavicles, slightly mounded on abdomen



DETAIL ALL MOLTS AND RETAINED FEATHERS ONTO DIAGRAM AND DETAIL IN NOTES

Colorimetry Data Sheet

SITE: _____

DATE: _____

BANDER: _____

FED BAND NUMBER: _____

CROWN MEASUREMENTS

PAGE: _____

	L*	a*	b*
1			
2			
3			
4			
5			
6			
7			
8			
MAX			
MIN			
AVG			
SD			

BACK MEASUREMENTS

PAGE: _____

	L*	a*	b*
1			
2			
3			
4			
5			
6			
7			
8			
MAX			
MIN			
AVG			
SD			

NOTES:

Entered by: _____ Date entered: _____

Willow Flycatcher Territory/Nest Record Form

Study Area: _____ Survey Site: _____ Territory/Nest no.: _____

Territory/Nest Location:
NAD: _____ Zone: _____

Nest Height: _____ m (approximate)

Nest Substrate: _____ (e.g., TASP=tamarisk, SAGO=Goodding willow, POFR=cottonwood, SAEX = coyote willow, etc.)

Territory UTM's:

Easting: _____

Distance to standing water or saturated soil when nest found: _____ (m)

Northing: _____

How was distance determined? _____

GPS Accuracy: _____ m

Distance from NU point to standing water or saturated soil when nest found: _____ (m)

How was distance determined? _____

Nest UTM's:

Depth of surface water at nest (please circle how wet you got when nest was found):

Easting: _____

dry damp muddy toes (<5cm) ankles (5-15 cm)

Northing: _____

calves (15-40 cm) knees (40-60 cm) thighs (60-80 cm)

GPS Accuracy: _____ m

waist (100 cm) too deep to wade (>100 cm)

PLEASE DO NOT FILL OUT ANYTHING BELOW

Bird 1: Color band combination: _____ Band Number: _____ Female

Bird 2: Color band combination: _____ Band Number: _____ Male

Willow Flycatcher			Willow Flycatcher			Cowbird			Cowbird		
Trans dates	B D	(T/F)	No.	Presumed	Confirmed	Trans dates	B D	(T/F)	No.	Complete? (T/F)	
											Eggs
											Nestlings
											Fledglings

Outcome (Record code & describe): _____

Outcome codes: UN= unknown; FY= fledged young, with at least one young seen leaving or in the vicinity of nest; FP= fledged young, as determined by parents behaving as if dependent fledgling(s) nearby; FU= suspected fledging of at least one young; FC= fledged at least one host young with cowbird parasitism; FD= Nest partially depredated with confirmed fledging of at least one young; PO= predation observed; PE= probable predation, nest empty and intact; PD= probable predation, damage to nest structure; AB= nest abandoned prior to egg(s) being laid; DE= deserted with egg(s) or young; PA= parasitized, host attempted to raise cowbird young. No host young were fledged from the nest; WE= failure due to weather; AD= failure, entire clutch added/infertile; OT= failure due to other, or unknown, causes.	Mayfield Success		
	(WIFL) Period	# Exposure days	Success
	Egg Laying		
	Incubation		
	Nestling		
Mayfield success codes: S= successful; D= depredated; U= status unknown/nest occupied- fate unknown; M= mortality other than predation; A= abandoned with host egg(s) or young; Z= abandoned, no (zero) eggs laid.			

Willow Flycatcher Territory/Nest Record Form (continued)

Study Area: _____ Survey Site: _____ Territory/Nest no.: _____

[illegible]

Brown-headed Cowbird Traps

Observer(s): _____ Start Time: _____ End Time: _____ Date: _____

Study Area: _____

	Trap #														
	M	F	J	M	F	J	M	F	J	M	F	J	M	F	
COWBIRDS															
Decoys previously in trap ¹															
Newly trapped															
Added ²															
Died in trap															
Missing															
Escaped during trap check															
Transferred ³															
Euthanized															
Total left in trap ⁴															
NON-TARGET SPECIES ⁵															

Comments _____

LCR Southwestern Willow Flycatcher Project - Vegetation Datasheet

Study area:			Survey site:			Plot type:			ID#:		
Date:		Obs:			UTM:			E		N	
GPS Accuracy:		m									
Nest site only		Substr.:		All plot centers		Dist water: _____ m		Woody Ground Cover		Total Canopy	
Substr. DBH: _____ cm		Substr. Ht.: _____ m		Dist can gap: _____ m		Dist Brdlf: _____ m		N:		E:	
Nest Ht.: _____ m or % - % x m		Nst Can Ht.: _____ m or % - % x m		Top Can.: _____ m or % - % x m		S:		W:		S:	
Species		TASP		SAGO		SAEX		POFR		SNAG	
OTSP1*:		OTSP2**:		OTSP3***:							
Shrub/ Sapling Count in 5 m Plot <or= 8 cm dbh	<1										
	1-2.5										
	2.6-5.5										
	5.6-8										
Species		TASP		SAGO		SAEX		POFR		SNAG	
OTSP1		OTSP2		OTSP3							
Tree Count in 5m Plot > 8 cm dbh	8.1-10.5										
	10.5-15										
	Measured Trees >15 cm dbh										
Species		TASP		SAGO		SAEX		POFR		SNAG	
OTSP1		OTSP2		OTSP3							
Tree Count in 5m to 11.3m Plot >8 cm dbh											

NOTES:

If, at ankle height or above, shrub/sapling/tree splits into multiple branches, count it as one stem and measure the biggest stem. If splits below ankle height, count all stems.

If shrub/sapling/tree is not at least breast height, do not count.

* Other species 1 (write out full name) _____ (Use the same type for every section.)

** Other species 2 (write out full name) _____ (Use the same type for every section.)

*** Other species 3 (write out full name) _____ (Use the same type for every section.)

Vertical Foliage Sampling (i.e., “Hits on the pole”)

CENTER PLOT								
Height (m)	Hits/Species							
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*: _____	OTSP2*: _____	OTSP3*: _____
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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21								
22								
23								
24								
25								

Record number of decimeters with hits on pole (within 10-cm radius) per 1-m interval up to 8 m; above 8 m, estimate 0, < 5, or > 5 or hits per meter interval.

***Use same OTSP (1,2,3) as listed on main record.**

Vertical Foliage Sampling (i.e., "Hits on the pole")

Study Area:		Survey Site:		Plot type:		ID#		Date:											
NORTH										EAST									
Height (m)	Hits/Species						Height (m)	Hits/Species											
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*		OTSP2*	OTSP3**	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*	OTSP2*	OTSP3**		
1							1												
2							2												
3							3												
4							4												
5							5												
6							6												
7							7												
8							8												
9							9												
10							10												
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21							21												
22							22												
23							23												
24							24												
25							25												

Record number of decimeters with hits on pole (within 10 cm radius) per 1-m interval up to 8 m; above 8 m, estimate 0, < 5, or > 5 or hits per meter interval.

*Use same OTSP (1,2,3) as listed on main record.

Vertical Foliage Sampling (i.e., "Hits on the pole")

SOUTH										WEST							
Height (m)	Hits/Species						Height (m)	Hits/Species									
	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*:		OTSP2*:	OTSP3*:	TASP	SAGO	SAEX	POFR	SNAG	OTSP1*:	OTSP2*:	OTSP3*:
1																	
2																	
3																	
4																	
5																	
6																	
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23																	
24																	
25																	

Record number of decimeters with hits on pole (within 10 cm radius) per 1-m interval up to 8 m; above 8 m, estimate 0, < 5, or > 5 or hits per meter interval.
 *Use same OTSP (1,2,3) as listed on main record.

SWFL Microclimate at Life History Study Areas

Study Area _____ **Survey Site** _____ **LOCATION ID** _____ – _____ – _____
(Study area) – (Location) – (Number)

UTM coordinates: Easting (x) 0 _____ **Northing (y)** _____ **Accuracy** _____ m

Dominant habitat within 10 m: Cottonwood/Willow Tamarisk Mixed Native/Exotic Other (specify: _____)

Estimated canopy cover at the logger: Less than 25% 25%-75% More than 75%

Temperature/Relative Humidity (T/RH)

Set-up: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

Logger 6-digit serial number (e.g., #630863): _____ Was red LED checked at set-up? Y or N

If nest site, when was nest vacated (known or estimated; MM/DD/YY)? _____

Logger location: Tree Shrub Est. overall height of tree or shrub? _____ m Est. height of logger _____ m

Take-down: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

Logger 6-digit serial number (e.g., #630863): _____

Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)?
No Yes If yes, explain: _____

Soil Moisture (SM)

Set-up: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

6-digit sensor serial number: _____ logger number: _____

Soil sample taken (at set-up only)? Yes No If no, explain: _____

Distance to saturated/inundated soil: _____ m **How distance was measured:** _____

SM readings: Plot center _____ % _____ mV

N: 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV **S:** 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV

E: 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV **W:** 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV

Comments: _____

Take-down: Date (MM/DD/YY): _____ Time (military): _____ Crew member(s): _____

6-digit sensor serial number: _____ logger number: _____

Distance to saturated/inundated soil: _____ m **How distance was measured:** _____

SM readings: Plot center _____ % _____ mV

N: 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV **S:** 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV

E: 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV **W:** 1.0 m _____ % _____ mV 2.0 m _____ % _____ mV

Comments: _____

Location identifier format: Study area code (MD, MQ, MM, PA, TM) – Location code (NS, WT, NU, SVR, SVD) – Nest number (for NS, WT, NU locations) or Seasonal Variation number; e.g., TM-NU-9A or MM-SVD-2

SWFL Microclimate

Soil Moisture Supplement

Study Area _____ Survey Site _____ LOCATION ID _____
 (Study area) – (Location) – (Number)

Date (MM/DD/YY): _____				Time (military): _____				Crew member(s): _____			
6-digit sensor serial number: _____				logger number: _____							
Distance to saturated/inundated soil: _____ m				How distance was measured: _____							
SM readings: Plot center _____ % _____ mV											
N: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		S: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		W: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
Comments: _____											

Date (MM/DD/YY): _____				Time (military): _____				Crew member(s): _____			
6-digit sensor serial number: _____				logger number: _____							
Distance to saturated/inundated soil: _____ m				How distance was measured: _____							
SM readings: Plot center _____ % _____ mV											
N: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		S: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		W: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
Comments: _____											

Date (MM/DD/YY): _____				Time (military): _____				Crew member(s): _____			
6-digit sensor serial number: _____				logger number: _____							
Distance to saturated/inundated soil: _____ m				How distance was measured: _____							
SM readings: Plot center _____ % _____ mV											
N: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		S: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		W: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
Comments: _____											

Date (MM/DD/YY): _____				Time (military): _____				Crew member(s): _____			
6-digit sensor serial number: _____				logger number: _____							
Distance to saturated/inundated soil: _____ m				How distance was measured: _____							
SM readings: Plot center _____ % _____ mV											
N: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		S: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		W: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
Comments: _____											

Date (MM/DD/YY): _____				Time (military): _____				Crew member(s): _____			
6-digit sensor serial number: _____				logger number: _____							
Distance to saturated/inundated soil: _____ m				How distance was measured: _____							
SM readings: Plot center _____ % _____ mV											
N: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		S: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
E: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV		W: 1.0 m _____ % _____ mV		2.0 m _____ % _____ mV					
Comments: _____											

Microclimate at Sites South of Topock – T/RH Downloads

Study Area _____ Survey Site _____ LOCATION ID _____
 (Study area) – (Survey site) – (Number)

<p>Download: Date (MM/DD/YY):_____ Time (military):_____ Crew member(s):_____</p> <p>Logger 6-digit serial number (e.g., #630863):_____ Did you check red LED? Y or N</p> <p>Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY):_____ Time (military):_____ Crew member(s):_____</p> <p>Logger 6-digit serial number (e.g., #630863):_____ Did you check red LED? Y or N</p> <p>Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY):_____ Time (military):_____ Crew member(s):_____</p> <p>Logger 6-digit serial number (e.g., #630863):_____ Did you check red LED? Y or N</p> <p>Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY):_____ Time (military):_____ Crew member(s):_____</p> <p>Logger 6-digit serial number (e.g., #630863):_____ Did you check red LED? Y or N</p> <p>Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:</p> <p>Comments:</p>
<p>Download: Date (MM/DD/YY):_____ Time (military):_____ Crew member(s):_____</p> <p>Logger 6-digit serial number (e.g., #630863):_____ Did you check red LED? Y or N</p> <p>Did any events occur that might have interfered with accuracy of data gathered by this logger (e.g., blown out of tree, etc.)? No Yes If yes, explain:</p> <p>Comments:</p>

Location ID codes: Study area codes – Topock Gorge = TG, Ehrenberg = EH, Cibola = CI, Imperial = IM, Mittry = MI, Yuma = YU.
 Survey site codes – Blankenship = BK, Havasu NE = HV, Three Fingers Lake = TF, Cibola Lake = CL, Walker Lake = WL, Paradise = PV,
 Hoge Ranch = HR, Rattlesnake = RS, Clear Lake = LK, Ferguson Lake = FL, Ferguson Wash = FW, Great Blue Heron = GB,
 Martinez Lake = ML, Mittry West = MW, Gila Confluence North = GC

